CLAIMS:

1. A transmission apparatus comprising:

an arrangement determiner that determines a
constellation mapping position indicating an arrangement
position of each symbol data in the IQ plane when
transmission data is retransmitted so that the
constellation mapping position becomes different from
that in a last transmission;

a data assigner that assigns transmission data to
each symbol so that the each symbol data with the same
amplitude is arranged in the constellation mapping
position determined by the arrangement determiner; and

a transmitter that transmits the transmission data
that is assigned to the each symbol in the data assigner.

2. The transmission apparatus according to claim 1,
wherein the arrangement determiner rotates the
constellation mapping position of the last transmission
by predetermined angles along a circumference of a circle
with an intersection point of the I axis and Q axis as
a center in the IQ plane to determine as the constellation
mapping point when the transmission data is
retransmitted.

3. The transmission apparatus according to claim 1,
further comprising:

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a data interchanger that interchanges predetermined bits of the transmission data so that a bit arrangement of each symbol when the transmission data is retransmitted becomes different from that in the last transmission,

5 wherein the data assigner assigns the transmission data interchanged in the data interchanger to each symbol.

4.   A transmission apparatus comprising:

a data interchanger that interchanges predetermined

10 bits of transmission data so that a bit arrangement of each symbol when the transmission data is retransmitted becomes different from that in a last transmission;

a data assigner that assigns the transmission data interchanged by the data interchanger to each symbol so

15 that each of a plurality of items of symbol data with the same amplitude is arranged in a constellation mapping position indicating an arrangement position of each symbol of the transmission data in the IQ plane; and

a transmitter that transmits the transmission data

20 that is assigned to the each symbol by the data assigner.

5.   A base station apparatus having a transmission apparatus,   wherein   the   transmission   apparatus comprising:

an   arrangement   determiner   that   determines   a

25 constellation mapping position indicating an arrangement position   of   each   symbol   data   in   the   IQ   plane   when transmission   data   is   retransmitted   so   that   the

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constellation mapping position becomes different from
that in a last transmission;

a data assigner that assigns transmission data to
each symbol so that the each symbol data with the same
5   amplitude is arranged in the constellation mapping
position determined by the arrangement determiner; and

a transmitter that transmits the transmission data
that is assigned to the each symbol by the data assigner.

10   6.   A communication terminal apparatus having a
transmission apparatus, wherein the transmission
apparatus comprising:

an arrangement determiner that determines a
constellation mapping position indicating an arrangement
15   position of each symbol data in the IQ plane when
transmission data is retransmitted so that the
constellation mapping position becomes different from
that in a last transmission;

a data assigner that assigns transmission data to
20   each symbol so that the each symbol data with the same
amplitude is arranged in the constellation mapping
position determined by the arrangement determiner; and

a transmitter that transmits the transmission data
that is assigned to the each symbol by the data assigner.
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7.   A transmission method comprising the steps of:
determining a constellation mapping position

indicating an arrangement position of each symbol in the
IQ plane when transmission data is retransmitted so that
the constellation mapping position becomes different from
that in a last transmission;

5   assigning transmission data to the each symbol so
that each symbol data is arranged in the determined
constellation mapping position; and

transmitting the transmission data assigned to the
each symbol.

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